

Special Issue

Bismuth-Based Materials for Photochemical and Photoelectrochemical Energy and Environment Applications

Message from the Guest Editors

Our Special Issue is focused on recent developments in bismuth-based material, a promising class of semiconductor catalyst for energy and environment applications. Bismuth-based photocatalysts have demonstrated superior performance in photochemical and photoelectrochemical applications, such as water splitting, CO₂ reduction, C-N coupling, pollutant control, and organic chemical synthesis. The unique electronic and structural properties of bismuth-based materials make them a versatile platform for designing efficient and selective photocatalysts and photoelectrodes. This Special Issue aims to provide a comprehensive overview of recent advances in bismuth-based materials, including their fabrication, characterization, optical and electronic properties, and photochemical and photoelectrochemical applications. We hope this Special Issue will stimulate further research in the field of bismuth-based materials and promote their practical applications in energy and environmental-related areas.

Guest Editors

Dr. Shipeng Wan

Department of Chemical and Biomolecular Engineering, Yonsei University, Seoul, Republic of Korea

Dr. Jie Jin

School of Environment and Safety Engineering, Jiangsu University, Zhenjiang, China

Deadline for manuscript submissions

closed (20 April 2024)



Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/186092

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

[mdpi.com/journal/
materials](https://mdpi.com/journal/materials)





Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



[mdpi.com/journal/
materials](https://mdpi.com/journal/materials)



About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /
CiteScore - Q1 (Condensed Matter Physics)